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EXAMINER	
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ART UNIT	PAPER NUMBER
2173	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/07/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/820,416	ENDLER ET AL.	
	Examiner	Art Unit	
	Blaine Basom	2173	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) *12-25 and 29* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11 and 26-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 August 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/11/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-11 and 26-28, drawn to simultaneously displaying video content on a flat surface, and menu content on a spherical surface over the flat surface, within a spherical display device, classified in class 715, subclass 848.

II. Claims 12-21 and 29, drawn to capturing an original video stream, magnifying the video stream, and storing the original and magnified streams, classified in class 348, subclass 240.99.

III. Claims 22-25, drawn to detecting a gravitational force, and displaying a captured content stream based thereon, classified in class 348, subclass 208.99.

The inventions are distinct, each from the other because of the following reasons:

Inventions I, II, and III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility, such as for effectively displaying menu options and associated content. Invention II has separate utility for capturing content, and automatically producing related content. Invention III has separate utility for accurately capturing content in adverse conditions. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II or Group III, restriction for examination purposes as indicated is proper.

During a telephone conversation with Applicants Attorney, Milton Frazier, on February 23, 2007 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-11 and 26-28. Affirmation of this election must be made by applicant in replying to this Office action. Claims 12-25 and 29 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Objections

Claim 9 is objected to because the "wherein" clause lacks a verb. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In each of claims 7 and 8, there is no antecedent basis for "the instructions."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2 and 9-11 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,628,313, which is attributed to Minakuchi et al. (hereafter referred to as "Minakuchi"). In general, Minakuchi describes an information retrieval method and apparatus in which main information, specified by the user, is displayed along with sub-information related to the main information (see e.g. column 2, line 65 – column 3, line 21). Minakuchi particularly discloses that the main information and its associated sub-information are presented via "virtual sphere," which is considered a spherical display (see e.g. column 8, line 63 – column 9, line 14; and FIG. 5).

Specifically regarding claim 1, Minakuchi teaches: displaying a first content (i.e. "main information") on a flat display surface within a spherical display (see e.g. column 2, line 65 – column 3, line 12; column 8, line 63 – column 9, line 14; and reference number 201 in FIG. 5); simultaneously displaying a second content (i.e. "sub-information") on a spherical display surface within the spherical display (see e.g. column 2, line 65 – column 3, line 12; column 8, line 63 – column 9, line 14; and reference number 203 in FIG. 5); and scrolling through the second content (i.e. "rotating" the spherical display surface) based on instructions while displaying the first content (see e.g. column 9, lines 1-14), wherein the spherical display surface

is imposed over the flat display surface such that the first content and the second content are distinctly and simultaneously viewed (see e.g. FIG. 5). Accordingly, Minakuchi teaches a method like that of claim 1.

As per claim 2, Minakuchi further teaches storing the first content (i.e. "main information") and the second content (i.e. "sub-information") in a storage device (see e.g. column 2, line 65 – column 3, line 12; and column 5, lines 56-58).

Concerning claim 9, Minakuchi demonstrates that the second content (i.e. the "sub-information") comprises a plurality of icons or thumbnails from which the user may select (see e.g. FIGS. 5-7; column 6, lines 33-40; column 9, lines 1-14; and column 9, lines 34-58). The second content described by Minakuchi is thus considered "menu information" like claimed.

With respect to claim 10, Minakuchi demonstrates that the spherical display surface displays the second content (i.e. the "sub-information") in a three dimensional viewpoint (see e.g. column 8, lines 63-67; and reference number 203 in FIG 5).

In reference to claim 11, Minakuchi describes: means for displaying a first content (i.e. "main information") on a flat display surface within a spherical display (see e.g. column 2, line 65 – column 3, line 12; column 8, line 63 – column 9, line 14; and reference number 201 in FIG. 5); means for simultaneously displaying a second content (i.e. "sub-information") on a spherical display surface within the spherical display (see e.g. column 2, line 65 – column 3, line 12; column 8, line 63 – column 9, line 14; and reference number 203 in FIG. 5); and means for scrolling through the second content (i.e. "rotating" the spherical display surface) based on instructions while displaying the first content (see e.g. column 9, lines 1-14), wherein the spherical display surface is imposed over the flat display surface such that the first content and

the second content are distinctly and simultaneously viewed (see e.g. FIG. 5). Accordingly, Minakuchi describes a system like that of claim 11.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the U.S. Patent of Minakuchi, which is described above, and also over PCT Publication No. WO 02/21529 to Barbieri. As described above, Minakuchi teaches a method like that of claim 1, used for searching for information, in which first content is displayed on a flat surface within a spherical display and second content is displayed within a spherical display surface of the spherical display. Minakuchi, however, does not explicitly disclose that the first content is a video stream or digital image, as is recited in claim 6, or that the first content is captured with a content capturing device, e.g. a video camera or digital camera, like recited in claims 3-5. Nevertheless, capturing video streams or digital images with such content capturing devices, and then searching through the captured information is well known in the art.

For example, Barbieri teaches displaying a digital video image (considered analogous to the "main information" of Minakuchi) and determining similar video images (considered analogous to the "sub-information" of Minakuchi) that are associated with the video image (see

e.g. page 2, lines 11-34). Such digital video images are necessarily taken with a content capturing device, i.e. a digital video camera, as is well-known in the art (see e.g. page 9, lines 31-34 of Barbieri).

Accordingly, it would have been obvious to one of ordinary skill in the art, having the teachings of Minakuchi and Barbieri before him at the time the invention was made, to apply the spherical display of Minakuchi to search for particular video images within a video stream captured by a digital video camera, like taught by Barbieri. That is, it would have been obvious to modify the spherical display of Minakuchi such that the main information (i.e. the first content) is a video image, which has been captured by a content capturing device, i.e. a digital video camera. It would have been advantageous to one of ordinary skill to apply the interface of Minakuchi to search video, because video search functionality is becoming useful due to the increase of multimedia data that can be stored in home devices, as is taught by Barbieri (see e.g. page 1).

Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the U.S. Patent of Minakuchi, which is described above, and also over U.S. Patent Application Publication No. 2002/0030665 to Ano. As described above, Minakuchi teaches a method like that of claim 1, used for searching for information, in which first content is displayed on a flat surface within a spherical display and second content is displayed within a spherical display surface of the spherical display. This second content is scrolled in response to instructions based on an input device, e.g. a trackball (see e.g. paragraph 0082). As such, Minakuchi does not

explicitly disclose that these instructions for scrolling are based on rotating a playback ring or knob, as is expressed in claims 7-8.

Nevertheless playback rings and knobs are well-known types of input devices used for scrolling displayed information. For example, Ano describes a playback ring (i.e. a "wheel"), considered a type of knob, which is used in conjunction with, e.g. a trackball, to scroll through content displayed on a screen (see e.g. paragraphs 0005, 0009, and 0098-0101).

It would have therefore been obvious to one of ordinary skill in the art, having the teachings of Minakuchi and Ano before him at the time the invention was made, to apply the playback ring of Ano to scroll through the displayed content of Minakuchi, i.e. to rotate the spherical display of Minakuchi. It would have been advantageous to one of ordinary skill to use such a playback ring, because it allows the user to more efficiently scroll through content, as is demonstrated by Ano (see e.g. paragraphs 0006-0009).

Claims 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Minakuchi and Barbieri, which is described above, and also over the teachings of Ano, also described above.

Specifically regarding claim 26, Minakuchi describes a spherical display for simultaneously displaying first content and second content, wherein the spherical display comprises a flat display surface for the first content and a spherical display surface for the second content, and wherein the first and second content are stored in a storage module, as is described above. Minakuchi further demonstrates that this second content comprises menu information, and Barbieri teaches applying such an interface to search for video content, i.e. such that the first

content comprises a video stream, as is described above. Accordingly, the above-described combination of Minakuchi and Barbieri teach a device similar to that of claim 26, which comprises: a spherical display for simultaneously displaying first content, i.e. a video stream, and second content, i.e. menu information, wherein the spherical display comprises a flat display surface for the first content and a spherical display surface for the second content; and a storage module to store the first content and second content. Minakuchi discloses that this second content is scrolled (i.e. the spherical display is rotated) in response to instructions based on an input device, e.g. a trackball, as is described above. As such, neither Minakuchi nor Barbieri explicitly discloses that these instructions for scrolling are based on rotating a playback ring, as is expressed in claim 26. Nevertheless playback rings are well-known types of input devices used for scrolling displayed information. For example, Ano describes a playback ring (i.e. a "wheel"), which is used in conjunction with, e.g. a trackball, to scroll through content displayed on a screen (see e.g. paragraphs 0005, 0009, and 0098-0101). It would have therefore been obvious to one of ordinary skill in the art, having the teachings of Minakuchi, Barbieri, and Ano before him at the time the invention was made, to apply the playback ring of Ano to scroll through the displayed content of Minakuchi and Barbieri, i.e. to rotate the spherical display. It would have been advantageous to one of ordinary skill to use such a playback ring, because it allows the user to more efficiently scroll through content, as is demonstrated by Ano (see e.g. paragraphs 0006-0009).

As per claim 27, Minakuchi demonstrates displaying the second content, i.e. menu information, with a three dimensional effect to distinguish it from the first content, i.e. video

stream (see e.g. FIG. 5). Accordingly, the combination of Minakuchi, Barbieri, and Ano described in the previous paragraph teaches a device like that of claim 27.

Concerning claim 28, Minakuchi demonstrates displaying the second content, i.e. menu information, overlaid on top of the first content, i.e. video stream (see e.g. FIG. 5). Accordingly, the above-described combination of Minakuchi, Barbieri, and Ano teaches a device like that of claim 28.

Conclusion

The prior art made of record on form PTO-892 and not relied upon is considered pertinent to applicant's disclosure. The applicant is required under 37 C.F.R. §1.111(C) to consider these references fully when responding to this action. The Kurtenbach et al. U.S. Patent cited therein describes a spherical display device used for displaying information, and the Noble et al. U.S. Patent cited therein demonstrates a spherically-displayed menu.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blaine Basom whose telephone number is (571) 272-4044. The examiner can normally be reached on Monday through Friday, from 8:30 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

btb
3/2/2007

TADESSE HAILU
Patent Examiner